

CLAIMS

What is claimed is:

- 1 1. In a network resolution domain having a plurality of user identifiers
2 on a per subscriber basis for identifying a user under different service environments,
3 a User Distribution Server (UDS) disposed to determine from a plurality of network
4 servers the specific network server in charge of said user under a particular service
5 environment, said UDS comprising:
6 a secondary database providing storage for user identifiers and
7 selected service data pertaining to said network servers;
8 a mechanism for transferring user identifiers and said selected service
9 data to said secondary database from primary databases associated with respective
10 network servers;
11 a querying mechanism disposed to receive a service request from a
12 Service Requester Node; and
13 a response mechanism disposed to transmit an answer message to said
14 Service Requester Node in response to said request, said answer comprising
15 information usable by said Service Requester Node to determine said specific
16 network server.

1 2. The User Distribution Server (UDS) of Claim 1 wherein:
2 said response mechanism transmits an answer comprising, selectively,
3 the specific network server in charge of said user under a particular service
4 environment; a list of possible servers if a redundant configuration exists; and a new
5 user identifier with an indication that another query on said new identifier is
6 necessary.

1 3. The User Distribution Server (UDS) of claim 1 wherein:
2 said UDS is adapted as a first UDS and said network includes a
3 second UDS, and wherein:
4 said transfer, querying and response mechanism are respectively
5 disposed to transmit data between said first UDS and said second UDS.

1 4. The User Distribution Server (UDS) of claim 1 wherein:
2 said transferring mechanism comprises operating means for
3 recovering user identifiers and necessary service data from specific network servers
4 acting as primary databases.

1 5. The User Distribution Server (UDS) of Claim 1 wherein:
2 the operating means includes means for informing said UDS about
3 needs for updating user identifiers and/or necessary service data at indication from
4 primary databases or another UDS.

1 6. The User Distribution Server (UDS) of Claim 5, wherein:
2 the operating means includes means for said UDS registering into and
3 withdrawing from all network servers intended for acting as primary databases.

1 7. The User Distribution Server (UDS) of Claim 6 wherein:
2 the operating means includes means for indicating recovery
3 preferences for recovering user identifiers and/or necessary service data for all
4 served users, for a specific set of users, or only for a particular user

1 8. The User Distribution Server (UDS) of Claim 7 wherein:
2 the operating means further includes means for recovering user
3 identifiers and necessary service data selectively, for at least one set of:

4 (a) identifiers of a specific type amongst a plurality of valid
5 identifier types;

6 (b) identifiers used in specific domains; and

7 (c) identifiers belonging to specific identification spaces in a
8 domain.

1 9. The User Distribution Server (UDS) of Claim 8 wherein data
2 sensitive to temporary validity per specific network service include a "Time To
3 Live" (TTL) parameter intended for determining the needs for data recovery from
4 primary databases.

1 10. the User Distribution Server (UDS) of Claim 8, further comprising:
2 at least one protocol handler module and, in the event said UDS
3 comprises more than one protocol handler module, a protocol discriminator module,
4 each protocol handler module being in charge of a particular telecommunications
5 protocol.

1 11. The User Distribution Server (UDS) of Claim 10, comprising:
2 at least one "Domain Name Server (DNS)" related protocol handler
3 module.

1 12. The User Distribution Server (UDS) of Claim 10, comprising:
2 at least one "Diameter" related protocol handler module.

1 13. The User Distribution Server (UDS) of Claim 10, comprising:
2 at least one "Light-Weight Directory Access Protocol (LDAP)"
3 related protocol handler module.

1 14. The User Distribution Server (UDS) of Claim 10 comprising:
2 at least one "Radius" related protocol handler module.

1 15. The User Distribution Server (UDS) of Claim 10, further comprising
2 protocol and processing means for responding to the service request using
3 an external database not intended for acting as primary database or as another UDS.

1 16. The User Distribution Server (UDS) of Claim 15, wherein said
2 external database is a number portability database.

1 17. A telecommunications system comprising:
2 at least one subscriber having a plurality of user identifiers for
3 identifying said subscriber under different service environments;
4 a plurality of servers; and
5 a User Distribution Server (UDS) for determining a specific network
6 server in charge of said user under a particular service environment, wherein said
7 UDS comprises:
8 a secondary database providing storage for user identifiers and
9 selected service data pertaining to said servers;
10 a mechanism for transferring user identifiers and said selected service
11 data to said secondary database from selected servers acting as primary databases;
12 a querying mechanism disposed to receive a service request from a
13 Service Requester Node; and

14 a response mechanism disposed to transmit an answer in response to
15 said request for use by said Service Requester Node in determining said specific
16 network server.

1 18. The telecommunications system of claim 17 wherein:
2 relevant user identifiers in at least one of a plurality of primary
3 databases may be submitted for updating to one specific UDS, to a group of UDS, or
4 to all UDS known at said at least one primary database, selectively.

1 19. The telecommunications system of claim 18, wherein:
2 at least one of a plurality of primary databases is arranged for
3 receiving UDS recovery preferences from one specific UDS, from a group of UDS,
4 or from all UDS known at said at least one primary database, selectively, and for
5 updating each UDS accordingly with each of the recovery preferences.

1 20. The telecommunications system of Claim 19, wherein:
2 the UDS acts as a Subscription Locator Function (SLF).

1 21. The telecommunications system of Claim 19, wherein:
2 at least one of a plurality of specific servers acting as primary
3 databases is a Home Subscription Server (HSS).

1 22. The telecommunications system of Claim 19, wherein:
2 at least one of a plurality of specific servers acting as primary
3 databases is a Presence Server.

1 23. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is an
3 Interrogating Call Status Control Function (I-CSCF).

1 24. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is a Serving
3 Call Status Control Function (S-CSCF).

1 25. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is a Mobile
3 Switching Center (MSC).

1 26. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is a Signalling
3 Gateway.

1 27. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is a GPRS
3 Supporting Node.

1 28. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is an
3 Application Server (AS) intended for multimedia related use.

1 29. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is an Open
3 Service Architecture Service Capability Server.

1 30. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is a Multimedia
3 Messaging Server.

1 31. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of Service Requester Nodes is a CAMEL
3 Gateway Server.

1 32. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of external databases used for resolution is a
3 Domain Name Server.

1 33. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of external databases used for resolution is
3 a database system based on Light-Weight Directory Access Protocol (LDAP).

1 34. The telecommunications system of Claim 17, wherein:
2 at least one of a plurality of external databases used for resolution is
3 a number portability database.

1 35. In a network resolution domain having a plurality of user identifiers
2 on a per subscriber basis for identifying a user under different service environments,
3 and wherein a User Distribution Server (UDS) is disposed to determine from a
4 plurality of network servers the specific network server in charge of said user under
5 a particular service environment, a method for operating the UDS comprising the
6 steps of:

7 establishing a secondary database in said UDS for storing user
8 identifiers and selected service data pertaining to said network servers;
9 transferring user identifiers and said selected service data to said
10 secondary database from primary databases associated with respective network
11 servers;
12 receiving a service request from a Service Requester Node; and
13 transmitting an answer message from said UDS to said Service
14 Requester Node in response to said request, said answer comprising information
15 usable by said Service Requester Node to determine and specific network server.

1 36. The method of Claim 35 wherein:

2 said transmitted answer comprises, selectively, the specific network
3 server in charge of said user under a particular service environment; a list of possible
4 servers if a redundant configuration exists; and a new user identifier with an
5 indication that another query on said new identifier is necessary.

1 37. The method of Claim 35 wherein said UDS comprises a first UDS
2 and said network includes a second UDS, and wherein:

3 said transfer, receiving and answer transmitting steps, respectively
4 include data transmission between said first UDS and said second UDS.